Remarks

Claims 1, 4-13, 15 and 16 are pending in the application.

Claims 1, 4-13, 15, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Examiner finds that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. .

Claims 1, 7, 8, 10, 11, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,104,515 to Cao (hereinafter Cao) in view of United States Patent No. 6,005,702 to Suzuki et al.(hereinafter Suzuki).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of United States Patent No. 6,097,525 to Ono et al. (hereinafter Ono).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of US Published Application No. 2003/0002121 by Miyamoto et al. (hereinafter Miyamoto).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of United States Patent No. 6,724,829 by Tzukerman et al. (hereinafter Tzukerman).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of United States Patent No. 5,745,613 Fukuchi.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of United States Patent No. 4,847,477 to Smith (hereinafter "Smith").

Each of the various rejections and objections are overcome by various amendments and arguments that are presented.

Entry of this Amendment is proper under 37 CFR § 1.116 since the amendment: (a) places the application in condition for allowance for the reasons discussed herein; (b) does not raise any new issue requiring further search and/or consideration since the amendments amplify issues previously discussed throughout prosecution; (c) satisfies a

requirement of form asserted in the previous Office Action; (d) does not present any additional claims without canceling a corresponding number of finally rejected claims; or (e) places the application in better form for appeal, should an appeal be necessary. The amendment is necessary and was not earlier presented because it is made in response to arguments raised in the final rejection. Entry of the amendment is thus respectfully requested.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Rejection under 35 U.S.C. 112, ¶1

Claims 1, 4-13, 15, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Examiner finds that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Specifically, the Examiner asserts that the feature "in which each pulse in the sequence of RZ pulses has associated with it a phase that is different than phase of pulses temporally adjacent to it" and the limitations of ODPSK and OQPSK are not mentioned in the disclosure. Applicants respectfully disagree.

The limitation regarding "temporally adjacent" is disclosed on page 5, lines 1-15. Claims 1 and 16 have been amended to explicitly claim the feature of "E-field value" in order to clearly show that the applicant had possession of the invention. Furthermore, the DPSK and QPSK modulators function in an optical network. They are inherently optical DPSK and QPSK. However, for clarity, those limitations have been amended to remove the reference to optical.

Rejection Under 35 U.S.C. 103(a)

Claims 1, 7, 8, 10, 11, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,104,515 to Cao (hereinafter Cao) in view of United States Patent No. 6,005,702 to Suzuki et al.(hereinafter Suzuki).

Applicants respectfully avoid these grounds of rejection for the following reasons.

Applicants has included the limitation of "wherein for each bit interval, the E-field value starts and ends at zero, and the E-field value is positive or negative at about the mid-point of the bit interval" to explicitly recite the relationship between the pulse and the phase which allows the signal to propagate effectively along a dispersion managed optical transmission medium. The support is found on page 5, lines 7-15 of the specification. None of the references teaches or suggests varying the phase of a transmitted signal in accordance with input data, thereby producing a signal having the E-field value representing a phase of 0 or π.

By contract, Cao discloses an arrangement for compensating for PMD in an optical signal using a temporal imaging technique. Suzuki teaches RZ format. Neither Cao nor Suzuki teaches or suggests this element.

Since independent claim 16 includes relevant limitations similar to those of claim 1, it is respectfully submitted that this claim is also patentable for at lease the reasons discussed above with respect to claim 1. Finally, since claims 4-13 and 15 depend from claim 1 and recite additional limitations therefrom, these claims are also patentable for at least the reasons discussed above with respect to claim 1.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of United States Patent No. 6,097,525 to Ono et al. (hereinafter Ono). Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of US Published Application No. 2003/0002121 by Miyamoto et al. (hereinafter Miyamoto). Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of United States Patent No. 6,724,829 by Tzukerman et al. (hereinafter Tzukerman).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of United States Patent No. 5,745,613 Fukuchi. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cao in view of Suzuki and in further view of United States Patent No. 4,847,477 to Smith (hereinafter "Smith").

Each of the grounds of rejection applies only to dependent claims, and each is predicated on the validity of the rejection under 35 U.S.C. 103 for the corresponding independent claims. Since the rejection of the corresponding independent claims under 35 U.S.C. 103 has been overcome, as described hereinabove, and there is no argument put forth by the Office that any other additional references supplies that which is missing from Cao in view of Suzuki to render the independent claims unpatentable, these grounds of rejection cannot be maintained.

Therefore, applicants' claims 1, 4-13, 15 and 16 are allowable under 35 U.S.C. 103(a).

Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732)530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully,

Date: 6/9/06

By E J Wall

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